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| APPLICATION NO.                                                                     | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO. |
|-------------------------------------------------------------------------------------|-------------|----------------------|--------------------------|------------------|
| 10/826,002                                                                          | 04/16/2004  | Katsuro Tsukamoto    | KIYO-44(KUP-04-20)       | 9225             |
| 7590                                                                                | 12/14/2005  |                      |                          |                  |
| Curt Harrington<br>Suite 250<br>6300 State University Drive<br>Long Beach, CA 98015 |             |                      | EXAMINER<br>DUONG, THO V |                  |
|                                                                                     |             |                      | ART UNIT                 | PAPER NUMBER     |
|                                                                                     |             |                      | 3753                     |                  |

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

TWS

|                              |                                      |                                           |  |
|------------------------------|--------------------------------------|-------------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/826,002 | <b>Applicant(s)</b><br>TSUKAMOTO, KATSURO |  |
|                              | <b>Examiner</b><br>Tho v. Duong      | <b>Art Unit</b><br>3753                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 13, 25, 31, 43, 49, 55, 56, 58, 59 and 61 is/are rejected.
- 7) ☒ Claim(s) 37 and 60 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 2-6,8-12,14-24,26-30,32-36,38-42,44-48,50-54 and 57.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of species of figures 1-3 in the reply filed on 11/14/2005 is acknowledged.

Claims 2-6,8-12,14-24,26-30,32-36,38-42,44-48,50-54 and 57 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,7,13,25,31,43,49,55-56,58-59 and 61 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takenoshita (US 4,902,024). Takenoshita discloses (figures 6-10) a device comprises of an expansive graphite sheet (2) and knitted metal wire mesh (1), wherein the graphite sheet and the mesh are combined so that the mesh is overlapped on both sides of the graphite sheet (figures 6,9 and 12); a resin layer (5) in at least one side of the graphite sheet covers an outside surface of the mesh. Regarding claims 7 and 43, the methods of forming "metal rolling processing" or "are washed with reduction water" are not germane to the issue of patentability of the device itself. "Even though product-by-process claims are limited by and defined by the process, determination of

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patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this instant case, the product in the product-by-process claim is the same as or obvious from a product of Takenoshita, the claims are unpatentable even though the prior product was made by a different process. Regarding claims 49,55-56,58-59 and 61, the term heat sink is defined as a substance or device for the absorption of unwanted heat (Merriam Webster’s Collegiate Dictionary 10<sup>th</sup> Edition). Takenoshita’s device is made of a high thermal conductive material such as metal wire and graphite, which is capable of absorbing any unwanted heat. Therefore, Takenoshita’s device is reasonably to read on these claims.

#### *Allowable Subject Matter*

Claims 37 and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Larson (US 4,471,837) discloses a graphite heat sink mounting.

Richey, III (US 6,131,651) discloses a flexible heat transfer device.

Voorhes et al. (US 5,390,734) discloses a heat sink of graphite material.

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Fujiwara et al. (US 6,257,328) discloses a thermal conductive unit and thermal connection structure.

Webb (US 6,542,371) discloses a high thermal conductivity heat transfer pad.

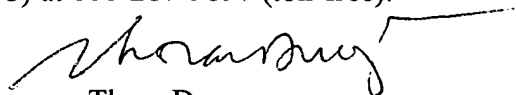
Tsakamoto (US 6,699,540) discloses a material of packaging with knitted wire mesh.

Yao (US 5,769,158) discloses an interface portion structure and reinforcing structure of flexible thermal joint.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Blau can be reached on 571-272-4406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tho v Duong  
Primary Examiner  
Art Unit 3753



TD

December 1, 2005